

1600

RAW SEQUENCE LISTING

DATE: 04/23/2003 TIME: 13:02:46

PATENT APPLICATION: US/09/905,589A

Input Set : N:\EBONY'S\EP.txt

Output Set: N:\CRF4\04232003\I905589A.raw

3 <110> APPLICANT: Chadwick, Brian Paul

Frischauf, Anna Maria

6 <120> TITLE OF INVENTION: METHODS AND COMPOSITIONS RELATING TO CD39-LIKE POLYPEPTIDES

AND NUCLEIC

ACIDS 9 <130> FILE REFERENCE: 28110/36120D

11 <140> CURRENT APPLICATION NUMBER: 09/905,589A

12 <141> CURRENT FILING DATE: 2001-07-13

14 <150> PRIOR APPLICATION NUMBER: 09/240,639

15 <151> PRIOR FILING DATE: 1999-01-29

17 <160> NUMBER OF SEQ ID NOS: 32

19 <170> SOFTWARE: PatentIn version 3.1

21 <210> SEQ ID NO: 1

22 <211> LENGTH: 2762

23 <212> TYPE: DNA

24 <213> ORGANISM: Homo Sapiens

26 <220> FEATURE:

27 <221> NAME/KEY: CDS

28 <222> LOCATION: (232)..(1599)

29 <223> OTHER INFORMATION:

ENTERED

W--> 32 <400> 1 60 33 gtggggtcgt atcccgcggg tggaggccgg ggtggcgcg gccggggcgg gggagcccaa 35 aagaccggct gccgcctgct ccccggaaaa gggcactcgt ctccgtgggt gtggcggagc 120 37 gcgcggtgca tggaatgggc tatgtgaatg aaaaaaggta tccgttatga aacttccaga 180 39 aaaacgagct acatttttca gcagccgcag cacggtcctt ggcaaacaag g atg aga 237 Met Ara 40 41 43 aaa ata too aac cac ggg ago otg ogg gtg gog aag gtg goa tac ooc 285 44 Lys Ile Ser Asn His Gly Ser Leu Arg Val Ala Lys Val Ala Tyr Pro 10 45 47 ctg ggg ctg tgt gtg ggc gtg ttc atc tat gtt gcc tac atc aag tgg 333 48 Leu Gly Leu Cys Val Gly Val Phe Ile Tyr Val Ala Tyr Ile Lys Trp 25 51 cac egg gee ace gee ace eag gee tte tte age ate ace agg gea gee 381 52 His Arg Ala Thr Ala Thr Gln Ala Phe Phe Ser Ile Thr Arg Ala Ala 40 45 55 ccg ggg gcc cgg tgg ggt cag cag gcc cac agc ccc ctg ggg aca gct 429 56 Pro Gly Ala Arg Trp Gly Gln Gln Ala His Ser Pro Leu Gly Thr Ala 60 55 59 gca gac ggg cac gag gtc ttc tac ggg atc atg ttt gat gca gga agc 477 60 Ala Asp Gly His Glu Val Phe Tyr Gly Ile Met Phe Asp Ala Gly Ser 75 525 63 act ggc acc cga gta cac gtc ttc cag ttc acc cgg ccc ccc aga gaa 64 Thr Gly Thr Arg Val His Val Phe Gln Phe Thr Arg Pro Pro Arg Glu





RAW SEQUENCE LISTING DATE: 04/23/2003 PATENT APPLICATION: US/09/905,589A TIME: 13:02:46

Input Set : N:\EBONY'S\EP.txt

Output Set: N:\CRF4\04232003\I905589A.raw

65			85					90					95					
67	act	ccc	acg	tta	acc	cac	gaa	acc	ttc	aaa	gca	gtg	aag	cca	ggt	ctt	573	
68	Thr	Pro	Thr	Leu	Thr	His	Glu	Thr	Phe	Lys	Ala	Val	Lys	Pro	Gly	Leu		
69		100					105					110						
71	tct	gcc	tat	gct	gat	gat	gtt	gaa	aag	agc	gct	cag	gga	atc	cgg	gaa	621	
72	Ser	Ala	Tyr	Ala	Asp	Asp	Val	Glu	Lys	Ser	Ala	Gln	Gly	Ile	Arg	Glu		
73	115					120					125					130		
							cag										669	
76	Leu	Leu	Asp	Val	Ala	Lys	Gln	Asp	Ile.	Pro	Phe	Asp	Phe	Trp	Lys	Ala		
77					135					140					145			
79	acc	cct	ctg	gtc	ctc	aag	gcc	aca	gct	ggc	tta	cgc	ctg	tta	cct	gga	717	
80	Thr	Pro	Leu	Val	Leu	Lys	Ala	Thr	Ala	Gly	Leu	Arg	Leu	Leu	Pro	Gly		
81				150					155					160				
83	gaa	aag	gcc	cag	aag	tta	ctg	cag	aag	gtg	aaa	gaa	gta	ttt	aaa	gca	765	
84	Glu	Lys	Ala	Gln	Lys	Leu	Leu	Gln	Lys	Val	Lys	Glu	Val	Phe	Lys	Ala		
85			165					170					175					
87	tcg	cct	ttc	ctt	gta	ggg	gat	gac	tgt	gtt	tcc	atc	atg	aac	gga	aca	813	
88	Ser	Pro	Phe	Leu	Val	Gly	Asp	Asp	Cys	Val	Ser	Ile	Met	Asn	Gly	Thr		
89		180					185					190						
91	gat	gaa	ggc	gtt	tcg	gcg	tgg	atc	acc	atc	aac	ttc	ctg	aca	ggc	agc	861	
92	Asp	Glu	Gly	Val	Ser	Ala	Trp	Ile	Thr	Ile	Asn	Phe	Leu	Thr	Gly	Ser		
93	195					200					205					210		
							agc										909	
96	Leu	Lys	Thr	Pro	Gly	Gly	Ser	Ser	Val	Gly	Met	Leu	Asp	Leu	Gly	Gly		
97					215					220					225			
99					atc		ttc			cgc					ctg		957	
99				Gln	atc Ile					cgc					ctg	cag ı Gln	957	
99 100 101) Gly	Ser	Thr	Gln 230	atc Ile	Ala	Phe	Let	235	cgc Arg	y Val	Glu	ı Gly	7 Thi 240	ctg Leu	Gln		
99 100 101 103	Gly Gly Ggc	Ser tcc	Thr cca	230 ccc	atc Ile	Ala tac	Phe ctg	Leu	Pro 235 g gca	cgc Arg	y Val	Glu gate	ı Gly	7 Thi 240 : aao	ctg Lev) c ago	Gln acc	957 1005	•
99 100 101 103 104	Gly Gly Ggc Ggc Ala	Ser tcc	Thr cca Pro	Gln 230 ccc Pro	atc Ile	Ala tac	Phe ctg	Leu acc Thr	Pro 235 g gca Ala	cgc Arg	y Val	Glu gate	Gly ttt Phe	Thi 240 aao Asr	ctg Lev) c ago	Gln		•
99 100 101 103 104 105	Gly Gly Ggc Ggc Ala	Ser tcc Ser	Thr ccca Pro 245	Gln 230 ccc Pro	atc Ile ggc	Ala tao	Phe ctg	aco Thr 250	Pro 235 g gca Ala	cgc Arg ctg Leu	y Val y cgo n Aro	Glu g ato g Met	ttt Phe	Thi 24(aac Asr	ctg Leu) c agg	Gln acc Thr	1005	
99 100 101 103 104 105	Gly Ggc Ggc Ala Tac	Ser tcc Ser aag	Thr cca Pro 245	230 230 ccc Pro	atc Ile ggc Gly	Ala tao Tyr	Phe ctg Leu agc	acconnection accounteraction accounteracti	Pro 235 g gca Ala ()	cgc Arg ctg Leu	y Val y cgg n Arg	Glu g ato g Met	ttt Phe 255	Thi 240 aac Asr ato	ctg Lev agg Arg	g acc g Thr		
99 100 101 103 104 105 107	Gly	Ser tcc Ser aag	Thr c cca Pro 245 cto Lev	230 230 ccc Pro	atc Ile ggc Gly	Ala tao Tyr	Phe ctg Leu agc	acconnection Tyres	Pro 235 g gca Ala ()	cgc Arg ctg Leu	y Val y cgg n Arg	Glug ato g Aet g Met c ggo	ttt The 255 cto	Thi 240 aac Asr ato	ctg Lev agg Arg	Gln acc Thr	1005	
99 100 101 103 104 105 107 108	Gly	Ser Ser Ser Lys 260	Thr cca Pro 245 g cto Leu	Gln 230 ccc Pro tat	atc Ile Graphy Graphy Graphy Graphy Graphy Graphy Graphy Graphy	tac Tyr tac	Phe ctg Leu agc Ser 265	aco Thr 250 tac	Pro 235 gca Ala Cto	cgc Arg Ctg Lev Cgg Gg Gg GG GG	y Val y cgg n Arg y ctc	Glug atog Met Gly Gly Gly 270	ttt The 255 Ctc	Thi 24(aac Asr ato mate	ctg Lev agg Arg tcg Ser	g acc g Thr g gca g Ala	1005 1053	
99 100 100 100 100 100 100 100 111	Gly	Ser tcc Ser aag 260 ctg	Thr cca Pro 245 cto Leu	Gln 230 ccc Pro tat Tyr	atc Ile	tac Tyr tac Tyr	Phe ctg Leu ago Ser 265	aco Thr 250 tac Tyr	Pro 235 gca Ala Cto Leu	cgc Arc Lev Gly	y Val y cgo y Aro y cto y Leu	g ato g ato g Met c ggo i Gly 270 g cct	g ttt g ttt Phe 255 g ctg / Leu	Thi 240 c aac e Asr d ato g ato g Asr i Met	ctg Lev Cagg Arc Gag Ser Ser	g acc g Thr g gca c Ala	1005	
99 100 101 103 104 105 108 108 111	Gly	Ser tcc Ser Lys 260 ctc	Thr cca Pro 245 cto Leu	Gln 230 ccc Pro tat Tyr	atc Ile	tac Tyr tac Tyr	Phe ctg Leu cago Ser 265 ggo	aco Thr 250 tac Tyr	Pro 235 gca Ala Cto Leu	cgc Arc Lev Gly	y Val y cgg y Arg y ctc y Leu y cag	g ato g ato g Met c ggo i Gly 270 g cct	g ttt g ttt Phe 255 g ctg / Leu	Thi 240 c aac e Asr d ato g ato g Asr i Met	ctg Lev Cagg Arc Gag Ser Ser	g acc g Thr g gca g Ala gga g Gly	1005 1053	
99 100 103 104 105 105 108 113 113	Gly	Ser too Ser Lys	Thr c cca 245 g ctc s Leu g gcg	GIN 230 ccc Pro tat Tyr	atc Ile Ggc Gly tcc Ser ctg	tac Tyr tac Tyr Gly	Phe ctg Leu agc Ser 265 ggc	Leu acg Thr 250 tac Tyr gtg Val	Pro 235 g gca Ala cto Leu gag	cgc Argo Argo Argo Argo Argo Argo Argo Argo	y Val y cgo y Aro y cto y Leu y Cao y Gln 285	g ato g ato g Met c ggo i Gly 270 g cct i Pro	g ttt g ttt E Phe 255 g ctg / Leu) E gct	y Thi 24(c aac e Asr d ato met c aac Lys	ctg Leu Cagg Arg Ser Gag Asp	g acc g Thr g gca Ala gga gga Gly 290	1005 1053 1101	
99 100 103 104 105 105 108 113 113 115	Gly	Ser tcc Ser aag 260 ctg Leu	Thr c cca Pro 245 cto Leu g gcg i Ala	GIN 230 230 Pro E tata Tyr atca Ile	atc i Ile i ggc i Gly i tcc i Ser i ctg i Leu i agc	tac Tyr tac Tyr Gly 280	Phe ctg Leu sago Ser 265 ggo Gly	Leu acg Thr 250 tac Tyr gtg Val	Pro 235 g gca Ala Ctc Leu gag Glu	cgc Arg CGC CGC CGC CGC CGC CGC CGC CGC CGC CG	y Val y cgg y Arg y ctc y Leu y Cag y Gln 285 c agt	g ato g ato g Met c ggo 1 Gly 270 cct p cct	g ttt g ttt E Phe 255 g ctc v Leu) c gct o Ala	Thi 240 aac Asr at a to	ctg c Leu c Leu c agg c Arc g tcc g tcc g ser g gat a gag	g acc g Thr g gca Ala gga Gly 290 g tgg	1005 1053	
99 100 101 103 104 105 107 113 113 115	Gly	Ser tcc Ser Lys 260 ctg Leu gags Glu	Three ccase Proceedings Level (1) gcg (1) Ala	Gin 230 ccc Pro tat Tyr atc Ile	atc ille iggo Gly tcc Ser ctg Leu agc	tac Tyr tac Tyr Gly 280	Phe ctg Leu sagc Ser 265 ggc Gly	acg Thr 250 tac Tyr gtc Val	Pro 235 gca gca Ala Car Leu gag Glu tct Ser	cgc o Arc o Arc o Cgc o Arc o Gg o Gl o Gl o Gl o Gl o Gl o Cgc o	y Val y cgo y cto y Lev y Cag y Gln 285 c agt	g atom atom atom atom atom atom atom atom	g ttt g ttt Phe 255 g ctc / Leu) c gct Ala	Thi 240 and Asr	ctg c Lev c Lev c Lev c agg c Arg g tcg g Ser g gat g Sag g Glu	a Gln acc Thr gca Ala Gly 290 gtgg	1005 1053 1101	
99 100 100 100 100 100 110 112 113 115 116	Gly Gly Gly Gly Gly Gly Gly Gly	Ser tcc Ser aag 260 ctg Leu gag Glu	Three ccae Pro 245 (ctc)	GIN 230 CCC Pro tat Tyr atc Ile	atc ille iggc iggc iggc iggc iggc iggc iggc igg	tac Tyr tac Tyr ggc Gly 280	Phe ctg Leu sagc Ser 265 ggc Gly	ace Thr 250 tac Tyr gte Val	Pro 235 gca Ala	cgc o Arc o Arc o Arc o Gl o Let o Gl	y Val y cgo y cto y Leu y Cag y Gln 285 agt	g atom atom atom atom atom atom atom atom	g ttt g ttt 255 g ctg / Leu) c gct o Ala	Thi 24(c) aac Asr G at G at C ac Asr Met	ctg c Lev c Lev c agg c Arg g tcg c Ser g gat s Asp a gag y Glu 305	a Gln g acc g Thr g gca Ala gga Gly 290 g tgg Trp	1005 1053 1101 1149	
99 100 101 103 104 105 107 113 114 115 115 117	Gly Gly Gly Gly Gly Gly Gly Gly	Ser tcc Ser aag 260 ctg Leu gag Glu	Three ccae Pro 245 (ctc)	GIN 230 CCC Pro tat Tyr atc Ile	atc atc Ile GgGG Gly Ctc Ser Ctg Agc Ser 295	tac Tyr tac Tyr Gly 280 cct	Phe ctg Leu cagc Ser 265 ggc Gly ctgc	accompany 250 taccompany 250 Value 1 taccompany 250 Value 250 Valu	Pro 235 gca Ala Control Leur Leur Glu Ser gag	cgc o Arc o Arc o Arc o Gl	y Val y cgg y ctc y Leu y Cag y Gln 285 agt o Ser	Glug atom atom atom atom atom atom atom atom	g ttt g ttt 255 g ctg / Leu) c gct o Ala c aaa	Thi 24(c) aac Asr Asr Met Asr Met Lys	ctg ctg cLev con Arc gtcg ser ggat s Asp a gag y Glu 305	a Gln g acc g Thr g gca Ala gga Gly 290 g tgg Trp gca	1005 1053 1101	
99 100 103 104 105 107 108 113 114 115 116 117 118	Gly	Ser tcc Ser aag 260 ctg Leu gag Glu	Three ccae Pro 245 (ctc)	GIN 230 CCC Pro Tata Tyr atc Ile	atc atc Ile Gggc Gly Ctc Ser Ctg Agc Ser 295 Gtc Val	tac Tyr tac Tyr Gly 280 cct	Phe ctg Leu cagc Ser 265 ggc Gly ctgc	accompany 250 taccompany 250 Value 1 taccompany 250 Value 250 Valu	Pro 235 gca Ala Car Ala Car Leu Glu Ser Glu Val	cgc o Arc o Arc o Arc o Gl	y Val y cgg y ctc y Leu y Cag y Gln 285 agt o Ser	Glug atom atom atom atom atom atom atom atom	g ttt g ttt 255 g ctg / Leu) c gct o Ala c aaa	Thi 240 aac Asr at a Met aac Lys Gly Gly Gly Alac Alac Asr a Alac Alac Alac Alac Alac Alac Alac Al	ctg ctg cLev cagg cagg cagg cagg cagg cagg cagg cag	a Gln g acc g Thr g gca Ala gga Gly 290 g tgg Trp	1005 1053 1101 1149	
99 100 103 104 105 107 118 118 118 119 120 121	Gly	Ser tcc Ser Lys 260 ctg Leu His	Three ccare Process Level 1 gcg Ala	GIN 230 CCC Pro Tata Tyr atc Ile GIN GIN 310	atc atc Ile Gggc Gly Ctc Ser Ctg Agc Ser 295 Gtc Val	tac Tyr tac Tyr ggc Gly 280 cct Pro	Phe ctg Leu agc Ser 265 ggc Gly Cys	accompany 250 taccompany year year year year year ago Arg	Pro 235 gca Ala Car Leu gag Glu tct Ser yal 315	cgc cgc Arc ctc cgc Arc cgc Cgc Arc cgc Cgc Cgc Cgc Cgc Cgc Cgc Cgc Cgc Cg	y Val	g atom Met ggg Gly 270 cct Pro	g ttt g ttt g the 255 g ctg y Leu) g gct o Ala c aaa c Lys	Thi 240 aac Asr at gar Met aac Lys Gly Gly Gly 320 a 320	ctg ctg cLev cagg cagg cagg cagg cagg cagg cagg cag	acc Thr gca Ala Gly 290 tgg Trp gca Ala	1005 1053 1101 1149	
99 100 103 104 105 107 108 113 114 115 116 117 120 121 123	Gly Gly Gly Gly Gly Gly Gly Gly	Ser tcc Ser Lys 260 ctc Glud His	Three coarses are property of the coarses are property of	Gin 230 ccc Pro Tata Tyr atc Ile Gin Val Giu 310 gaag	atc atc atc atc atc atc atc agg agg agg agg agg agg agg agg agg ag	tace Tyr tace Tyr ggc Gly 280 cct Pro	Phe ctg Leu agc Ser 265 ggc Gly Cys tgc Tyr	ace Thr 250 tac Tyr gtc Val ttc Are	Pro 235 gca Ala Control Contro	cgc cac cac cac cac cac cac cac cac cac	y Val	g atom gage at the	g ttt g ttt g ttt 255 g ctc y Leu) c gct o Ala c aaa e Lys g tc	Thi 240 and a Asr a Asr a Asr a Lys a Gly	ctg ctg c Lev c Lev c ago c Arc g tcg c Ser g gat a gag y Glu a gcg a Ala c caa	acc Thr gca Ala Gly 290 tgg Trp gca Ala	1005 1053 1101 1149	
99 100 103 104 105 107 108 113 114 115 116 120 123 123 124	Gly Gly Gly Gly Gly Gly Gly Gly	Ser tcc Ser Lys 260 ctc Glud His	Three coarses are property of the coarses are property of	GIN 230 CCC Pro Tata Tyr atc Ile Val Glu 310 gage Glu 310 ccc Glu	atc atc atc atc atc atc atc agg agg agg agg agg agg agg agg agg ag	tace Tyr tace Tyr ggc Gly 280 cct Pro	Phe ctg Leu agc Ser 265 ggc Gly Cys tgc Tyr	accompany of the control of the cont	Pro 235 gca Ala Control Glugger Services Services Services Argania Arg	cgc cac cac cac cac cac cac cac cac cac	y Val	g atom gage at the	g ttt g ttt g ttt 255 g ctc y Leu) t gct o Ala c aaa e Lys g tc y Val	Thi 240 and a control of the control	ctg ctg c Lev c Lev c ago c Arc g tcg c Ser g gat a gag y Glu a gcg a Ala c caa	acc Thr gca Ala Gly 290 tgg Trp gca Ala	1005 1053 1101 1149	
99 100 103 104 105 107 108 113 115 116 117 120 123 124 125	Gly Gly Gly Gly Gly Gly Gly Gly	Ser too Ser too Ser Lys 260 Cto Cto Gluck	Three coarse Proceedings Level 19 19 19 19 19 19 19 19 19 19 19 19 19	Gin 230 CCC Pro Tata Tyr atc Ile Gin Val Giu 310 Giu	atc atc atc atc atc atc agg agg agg atc agg agg agg agg agg agg agg agg agg ag	tac Tyr tac Tyr 280 280 cct Pro	Phe ctg Leu agc Ser 265 ggc Gly Cys Tyr	acg Thr 250 tac Tyr gtg Val ttg Leu agg Arg	Pro 235 gca Ala Control Glub Ser Ser Glub Ser Glub Ala Glub Argonia Ar	cgc cgc car car car car car car car car car ca	y Val	g atom atom atom atom atom atom atom atom	g ttt g ttt g ttt 255 g ctg v Leu) c gct o Ala c aaa e Lys g to v Val 335	Thi 240 and a see Asr a see Asr a Lys a gga a Gly a gca a gc	ctg ctg cLev cagg cagg cagg cagg cagg cagg cagg cag	Gln Gacc Thr Gca Ala Ggy 290 tgg Trp Gaca Ala Asn	1005 1053 1101 1149 1197	
99 100 103 104 105 107 108 113 115 116 117 118 120 123 124 125 127	Gly Gly Gly Gly Gly Gly Gly Gly	Ser too Ser too Ser Lys 260 Cto	Three coarses are property of the coarses are property of	GIN 230 CCC Pro Tata Tyr atc Ile GIU 310 GIU 3	atc atc atc atc atc atc atc atc acc acc	tac Tyr tac Tyr 280 280 cct Pro	Phe ctg Leu agc Ser 265 ggc Gly Cys Tyr gct Ala	acg Thr 250 tac Tyr gtg Val ttg Leu agg Arg gcc Ala 330 gtg	Property Pro	cgc cgc Arco Arco Cgc Arco Cgc	y Val y cgg y ctc y Leu y cag y Cln 285 agt y Ser y ggg t cag y Cln 285 agt y Ser y tea y Ser y tea y Ser y tea y Ser y tea y Ser y tea y t	g atom gage of the	g ttt g ttt g ttt 255 g ctg v Leu) c gct o Ala c aaa e Lys g to v Val 335 c tto	Thi 240 and a see Asr a see Asr a Lys a gga Gly a gca Gl	ctg ctg c Lev cag	Gln Gacc Thr Gca Ala Ggy 290 tgg Trp Gaca Ala Asn ttc	1005 1053 1101 1149	
99 100 103 104 105 107 108 113 115 116 117 118 120 123 124 125 127	Gly Gly Gly Gly Gly Gly Gly Gly	Ser too Ser too Ser Lys 260 Cto	Three coarses are property of the coarses are property of	GIN 230 CCC Pro Tata Tyr atc Ile GIU 310 GIU 3	atc atc atc atc atc atc atc atc acc acc	tac Tyr tac Tyr 280 280 cct Pro	Phe ctg Leu agc Ser 265 ggc Gly Cys Tyr gct Ala	acg Thr 250 tac Tyr gtg Val ttg Arg gcc Ala 330 gtg	Property Pro	cgc cgc Arco Arco Cgc Arco Cgc	y Val y cgg y ctc y Leu y cag y Cln 285 agt y Ser y ggg t cag y Cln 285 agt y Ser y tea y Ser y tea y Ser y tea y Ser y tea y Ser y tea y t	g atom gage of the	g ttt g ttt g ttt 255 g ctg y Leu) g gct o Ala aaa E Lys g tc y Val 335 c tto	Thi 240 and a see Asr a see Asr a Lys a gga Gly a gca Gl	ctg ctg c Lev cag	Gln Gacc Thr Gca Ala Ggy 290 tgg Trp Gaca Ala Asn	1005 1053 1101 1149 1197	





RAW SEQUENCE LISTING

DATE: 04/23/2003 PATENT APPLICATION: US/09/905,589A TIME: 13:02:46

Input Set : N:\EBONY'S\EP.txt

Output Set: N:\CRF4\04232003\1905589A.raw

132	tcc tac Ser Tyr 355			_		-	_						-			1341
	aag gga Lys Gly															1389
	gtg tgt Val Cys															1437
	atg gad Met Asp															1485
	agg agg Arg Sei 420	Lys														1533
152	agc tgg Ser Trp 435															1581
	cag aad Gln Lys	_				tagi	ggco	cga (gccat	tccct	ig to	ccc	gtca	g		1629
159	cagtgto	tgt	gtgt	ctgca	at aa	acco	ctcct	gto	cctg	gacg	tgad	cttca	atc o	ctgag	ggagcc	1689
	acagcac															1749
163	tgctgcd	ctg	gcat	cage	ct ct	tcca	agtca	a cat	ctg	gcca	gag	gct	gtc 1	tggad	cctggg	1809
	ccctgct															1869
	aggcaca															1929
	ggggctg															1989
	gtttcct															2049
	cctggct															2109
	cggcaco															2169
	agttcad															2229
	agacaco															2289
	tgccggg		_	-			_		_	-	-		-	-		2349
	gtgtggg															2409
	ctgtgtc															2469
	aggtgca															2529 2589
	cgggcca															2649
	gggccgt agtgaat															2709
	tgacago														aaayyt	2762
	<210> S				a ac	aaaa	aaaa	aaa	aaaa	aaaa	aaaa	aaaa	aaa o	aaa		2102
	<211> I															
	<212> 7			,												
	<213> 0			Homo	Sar	oiens	3									
	<400> \$															
	Met Arc				Asn	His	Gly	Ser	Leu	Arg	Val	Ala	Lys	Val	Ala ·	
206				5			-		10	-			-	15		
	Tyr Pro	Leu	Gly	Leu	Cys	Val	Gly	Val	Phe	Ile	Tyr	Val	Ala	Tyr	Ile	
210	_		20		_		-	25			_		30	-		





RAW SEQUENCE LISTING DATE: 04/23/2003 PATENT APPLICATION: US/09/905,589A TIME: 13:02:46

Input Set : N:\EBONY'S\EP.txt

Output Set: N:\CRF4\04232003\1905589A.raw

213 214	Lys	Trp	His 35	Arg	Ala	Thr	Ala	Thr 40	Gln	Ala	Phe	Phe	Ser 45	Ile	Thr	Arg
	Δla	Δla		Glv	Δla	Δra	Trn		Gln	Gln	Δla	His		Pro	T.e.11	Glv
218	711 U	50	110	Cry	111.0	1119	55	O- y	01	0111	1114	60	501		Dea	
	Thr		Ala	Asp	Glv	His		Val	Phe	Tvr	Glv		Met	Phe	Asp	Ala
222		1114	1114	тор	O _T	70	014	• • • •	1110	- 1 -	75	110	1100		1100	80
		Ser	Thr	Glv	Thr		Val	His	Val	Phe		Phe	Thr	Arg	Pro	
226	011			04.7	85	9				90	V			9	95	
	Ara	Glu	Thr	Pro		Leu	Thr	His	Glu		Phe	Lvs	Ala	Val	Lvs	Pro
230	9			100					105			-1		110		
	Glv	Leu	Ser	Ala	Tvr	Ala	Asp	Asp	Val	Glu	Lvs	Ser	Ala	Gln	Gly	Ile
234	- 4		115		4		-	120			-		125		-	
237	Arg	Glu	Leu	Leu	Asp	Val	Ala	Lys	Gln	Asp	Ile	Pro	Phe	Asp	Phe	Trp
238	_	130			_		135	-		_		140		_		
241	Lys	Ala	Thr	Pro	Leu	Val	Leu	Lys	Ala	Thr	Ala	Gly	Leu	Arg	Leu	Leu
242	145			,		150					155					160
245	Pro	Gly	Glu	Lys	Ala	Gln	Lys	Leu	Leu	Gln	Lys	Val	Lys	Glu	Val	Phe
246					165					170					175	
249	Lys	Ala	Ser	Pro	Phe	Leu	Val	Gly	Asp	Asp	Cys	Val	Ser	Ile	Met	Asn
250				180					185					190		
253	Gly	Thr	-	Glu	Gly	Val	Ser		Trp	Ile	Thr	Ile		Phe	Leu	Thr
254			195					200					205			
	Gly		Leu	Lys	Thr	Pro	_	Gly	Ser	Ser	Val	_	Met	Leu	Asp	Leu
258		210		_		~ -	215		_,	_	_	220		~ 1	~ 1	 .
	_	Gly	Gly	Ser	Thr		Ile	Ala	Phe	Leu		Arg	Val	Glu	GLy	
	225	~ 1	\		D	230	6 1		T	m1	235	T	70	Mat	D1	240
	Leu	GIn	Ala	Ser		Pro	GTA	Tyr	Leu		Ala	Leu	Arg	Met		Asn
266	7	m b	П	T	245	m	Com	m	Com	250	T 0	c1	T 0	C1	255	Mo+
270	Arg	THE	TÀL	ьуs 260	ьеи	TÀT	ser	ıyı	265	ıyı	ьеп	СТУ	ьeu	Gly 270	ьeu	Met
	Sor	ת 1 ת	λrα		7.1 -	Tlo	Lou	G1 v		Wal	Glu	Clv	Gln	Pro	Δla	Luc
274	Ser	ліа	275	ьеи	ALG	116	пеп	280	СТУ	Val	GIU	СТУ	285	FIO	лла	цуз
	Asp	Glv		Glu	Len	Val	Ser		Cvs	T.e.ii	Ser	Pro		Phe	Lvs	Glv
278	1100	290	Lys	OLU	ДСС	• • •	295	110	O J D	Lou	501	300	001			011
	Glu		Glu	His	Ala	Glu		Thr	Tvr	Ara	Val		Glv	Gln	Lvs	Ala
	305					310			-1-	5	315		1		- -	320
		Ala	Ser	Leu	His		Leu	Cvs	Ala	Ala	Arq	Val	Ser	Glu	Val	Leu
286					325			- 4		330	,				335	
	Gln	Asn	Arg	Val		Arg	Thr	Glu	Glu	Val	Lys	His	Val	Asp	Phe	Tyr
290			,	340		_			345		-			350		-
293	Ala	Phe	Ser	Tyr	Tyr	Tyr	Asp	Leu	Ala	Ala	Gly	Val	Gly	Leu	Ile	Asp
294			355	-	-	-	-	360			_		365			_
297	Ala	Glu	Lys	Gly	Gly	Ser	Leu	Val	Val	Gly	Asp	Phe	Glu	Ile	Ala	Ala
298		370	-	_	_		375			_		380				
	Lys	Tyr	Val	Cys	Arg	Thr	Leu	Glu	Thr	Gln	Pro	Gln	Ser	Ser	Pro	Phe
	385	_		•	=	390					395					400
305	Ser	Cys	Met	Asp	Leu	Thr	Tyr	Val	Ser	Leu	Leu	Leu	Gln	Glu	Phe	Gly
306					405					410					415	
309	Phe	Pro	Arg	Ser	Lys	Val	Leu	Lys	Leu	Thr	Arg	Lys	Ile	Asp	Asn	Val





DATE: 04/23/2003

TIME: 13:02:46

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/905,589A

Input Set : N:\EBONY'S\EP.txt

Output Set: N:\CRF4\04232003\I905589A.raw

	310				420					425					430			
		Glu	Thr	Ser		Ala	Leu	Glv	Ala		Phe	His	Tyr.	Ile		Ser	Leu	
	314			435				3	440				1	445	-			
		Asn	Arg	Gln	Lys	Ser	Pro	Ala	Ser									
	318		450		•			455										
	•	<210)> SI	EQ II	ONO:	: 3												
			1> LF															
	323	<212	2> TY	PE:	DNA													
	324	<213	3> OI	RGAN]	SM:	Homo	o Sag	oiens	3									
	326	<220)> FI	EATUE	RE:													
	327	<223	1> NA	ME/F	KEY:	CDS												
	328	<222	2> LC	CAT	ON:	(83)) (2	1669))									
	329	<223	3> O	THER	INFO	DRMA!	rion:	:										
->		<400																
																	aatcgg	<u>,</u> 60
		ctc	cgcad	cag o	ctago	gagaa	aa aq		-				-	_			a tgt	112
	336								: Phe	e Thi	: Val	. Lei	ı Thi	Arg	g G1r	n Pro	Cys	
	337.							1				5					10	1.00
							aag											160
		GIU	GIN	Ата	сту	Leu 15	Lys	Ата	ьeu	Tyr	Arg	Thr	Pro	Inr	тте	25	Ala	
	341	++~	~+ ~	a+ a	++~		~+ ~	2 4 +	a++	~+ ~		a++	a+a	2 4 +	2+0		ata	208
							gtg Val											200
	345	rea	vaı	val	30	ьeи	vaı	Set	116	35	vaı	пеп	vaı	Ser	40	1111	vai	
		atc	cad	atc		aad	caa	nan	atc		cct	cca	aaa	cta		tat	aat	256
							Gln											250
	349		0111	45		Lyo	0111	014	50				013	55	2,0	-1-	017	
		att	ata		gat	acc	ggg	tct		aσa	acc	aca	atc		ata	tat	caa	304
							Gly											
	353		60		1-		1	65					70	2		_		
		tgg	cca	gca	gaa	aaa	gag	aat	aat	acc	gga	gtg	gtc	agt	caa	acc	ttc	352
	356	Trp	Pro	Āla	Glu	Lys	Glu	Asn	Asn	Thr	Gly	Val	Val	Ser	Gln	Thr	Phe	
	357	75					80					85					90	
	359	aaa	tgt	agt	gtg	aaa	ggc	tct	gga	atc	tcc	agc	tat	gga	aat	aac	CCC	400
		Lys	Cys	Ser	Val	Lys	Gly	Ser	Gly	Ile	Ser	Ser	Tyr	Gly	Asn	Asn	Pro	
	361					95					100					105		
							gcc											448
		Gln	Asp	Val		_	Ala				_	Met	Gln	Lys		Lys	Gly	
	365									115					120		-	
							ctc											496
		Gln	Val		Ser	His	Leu	His	_	Ser	Thr	Pro	TTE		Leu	GIĀ	Ala	
	369			125					130					135				E 4 4
							ttg											544
		rnr		стХ	мет	Arg	Leu		Arg	ьeu	GIN	ASN		inr	АТА	нта	ASII	
	373	~	140	a++	~~~	200	a t- a	145	~~~	+	++~	222	150	~~~	000	+++	a 20	592
							atc											J32
		155	val	теп	GIU	26I	Ile 160	GIII	Ser	тАт	rne	165	Ser	GTII	LIO	FIIE	170	
	311	T 2 2			_		100					100					1/0	

379 ttt agg ggt gct caa atc att tct ggg caa gaa ggg gta tat gga

640



RAW SEQUENCE LISTING ERROR SUMMARY PATENT APPLICATION: US/09/905,589A

DATE: 04/23/2003 TIME: 13:02:47

Input Set : N:\EBONY'S\EP.txt

Output Set: N:\CRF4\04232003\I905589A.raw

Invalid Line Length:

The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:1; Line(s) 6





DATE: 04/23/2003

TIME: 13:02:47

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/905,589A

Input Set : N:\EBONY'S\EP.txt

Output Set: N:\CRF4\04232003\I905589A.raw

L:32 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:1,Line#:29 L:332 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:3,Line#:329 L:664 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:5,Line#:661 L:924 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:7,Line#:921